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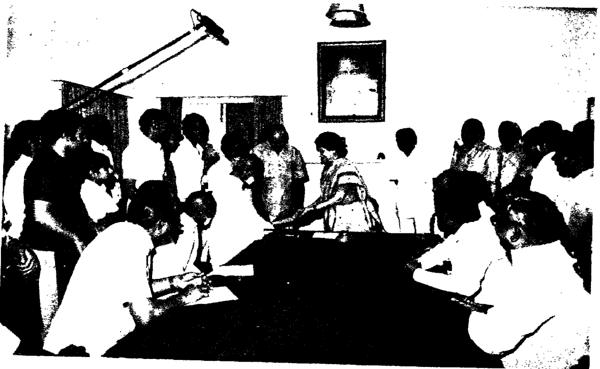
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Mrs. Indira Gandhi, Prime Minister of India, presenting a copy of Agam aur Tripitak, Vol. II to Muni Sri Nagraj ji. D. Litt. after its release on May 11, 1983.

Kinematics of Venus in Bhadrabahu Sanhita

SAJJAN SINGH LISHK

Here a simple probe is rendered into the Kinematics of Venus moving in different *vithis* (lanes) among the stars. It is revealed that Jainas had some trends towards the study of the phenomena of heliacal rising and setting of Venus in different parts of lunar zodiac.

1. *Introduction*

Long long ago, the phenomena of heliacal rising and setting of stars were known. The Assyrians had a stellar calendar as decoded from the Kultepe texts of the 19th century B.C., which comprised of twelve months including at least two names of these months chosen for astronomical phenomena which occurred every year during the months so named : Tanmatra (heliacal rising) was the month of rising of the constellation Canis Major, the principal star of which, Sirius, played an important part in the Assyrian pantheon ; Makhur-ili (meeting of the gods) alludes to the conjunction between the Moon and the Pleiades prior to the heliacal setting of the latter.[1] According to *Rg Veda* (i.105. 11), ancient Hindus had also identified the heliacal rising of the dog-star (Sirius).[2]

Apart from the diurnal rising and setting, a star or a planet is said to be heliacally set and risen when it disappears in the Sun's glare before conjunction and returns to visibility thereafter. The inferior planets, Mercury and Venus, become combust twice during their synodic periods. They set in the west a few days before inferior conjunction and rise in the east, and again set in the east some days before superior conjunction and rise in the west. Superior planets like Mars, Jupiter and Saturn always heliacally set in the west and after conjunction the planet moves relatively to the west of Sun and heliacally rises as a morning star in the eastern horizon a little before sunrise.

For heliacal rising of stars and planets on the horizon, Sun must be situated a few degrees below horizon so that the sky illumination due to

[1] *Encyclopaedia Britannica*, Vol. 4(1969), p. 623.

[2] Tilak, B. G. (1972), *Orion*, fifth edition, p. 119.

Sun may become so diminished as essential for visibility of the particular star or the planet. Although stars upto the 6th magnitude become visible at the close of the astronomical twilight (Sun 18° below the horizon) in the evening till the beginning of the astronomical twilight in the morning, yet the stars fainter than magnitude 4.0 are hardly visible on horizon because of greater density and thickness of atmosphere near the horizon during this period. During the period of astronomical twilight (Sun not more than 18° below the horizon), the part of sky above the Sun is more illuminated than rest of the sky ; consequently the visibility condition (brilliancy of the star) during this period for stars on the horizon diminishes as they are situated nearer to the Sun. Besides, in a particular case of the planet Venus near its maximum brilliancy, sometimes it becomes visible at a high altitude in a clear sky even during the day time. Moreover, when the geocentric latitude of Venus exceeds 6° at the time of geocentric conjunction with Sun, it may not then become heliacally invisible for places at very high latitudes, and the planet will be visible both in the morning and the evening for a few days.[3]

Besides, inferior planets are retrograde during inferior combustion and direct during superior combustion. So the magnitude of relative velocity of an inferior planet (Mercury or Venus) with respect to Sun is equal to the sum or the difference of magnitudes of their respective geocentric velocities during inferior and superior combustions respectively. Consequently Venus traverses the arc of combustion (double the arc of visibility or planet's angular stretch with respect to the Sun during which the planet remains heliacally invisible) rapidly in inferior combustion than in superior combustion. Besides, Venus is nearer to the earth while in inferior combustion than while in superior combustion. Hence magnitude of Venus becomes greater in inferior combustion than the same in superior combustion. Consequently the arc of visibility of Venus (value of depression of the Sun below horizon required for the occurrence of phenomena of heliacal rising and setting of Venus) is smaller in inferior combustion than the same in superior combustion. However, the eccentricity of orbit of Venus is small, so its magnitude at a particular phenomena (heliacal rising or setting) becomes very nearly the same in every revolution yielding nearly the same value for the arc of visibility necessary for the heliacal rising or setting. A typical table as given below by Neugebauer and revised by Schoch is reproduced :[4]

[3] See Lahiri, N.C. and Chaudhuri, Ajana (1966), 'Heliacal Rising and Setting of Planets', *Science and Culture*, Vol. 32 (Jan. 1966), pp. 14-21.

[4] *Ibid.*
See also C. Schoch (1928), *Astronomical and Calendariographical Table* (Oxford).

Table No. 1

Arc of Visibility of Venus for Heliacal Rising or Setting

	Heliacal rising	Heliacal setting
Venus—		
Western horizon,		
Direct	5°.8	...
Retrograde	...	5°.2
Eastern horizon,		
Retrograde	5°.8	...
Direct	...	5°.9

Evidently the heliacal visibility of Venus would be greatly influenced by factors like the brightness of the planet, azimuthal difference between Sun and the planet, altitude of the place of observation, intensity of illumination of twilight and atmospheric conditions prevailing at the place. In the light of foregoing discussion it is revealed in the following paragraphs that Jainas had some trends towards kinematical studies of the phenomena of heliacal rising and setting of Venus in different parts of lunar zodiac.

2. *Concept of Vithis (Lanes) of Venus*

Venus appears as a morning star or an evening star. The lustre of the capricious goddess of beauty depends upon several factors as mentioned before. The phenomena of gradual diminution of the lustre of Venus from its full brilliancy to the state of invisibility and vice versa[5] very similar to that of moon must have been noticed, albeit inadequately by the ancient star-gazers. Some alike trends are exhibited in some texts of Jaina canon. Jainas had cognised the phenomena of heliacal rising and setting of Venus and they attempted to estimate the average velocities of Venus in heliacal combustion in different parts of lunar zodiac. The heliacal combust Venus is supposed to move in different *vithis* (lanes) among stars. The earliest record in this connection is found in *Thāṇāṅga*

[5] Ball, R. S. (1892), *Story of the Heavens*, p. 140.

(*Sthānāṅga*) *Sūtra* (*TSS*), a Jaina canonical work[6] of about 300 B.C. *TSS* 9.699 states as :

"There are nine *vithis* (lanes) of Venus, viz. *haya vithi* (horse lane), *gaja vithi* (elephant lane), *nāga vithi*, (snake lane), *vṛṣabha vithi* (bull lane), *go vithi* (cow lane), *uraga vithi* (reptile lane), *aja vithi* (goat lane), *mṛga vithi* (deer lane), *vaiśvānara vithi* (fire lane)."

The word '*vithi*' literally means a lane. Thus for instance, *haya vithi* alludes to the notion that it denotes the zodiacal lane among the stars where Venus moves like a *haya* (horse). We shall later come to this point again.

But slightly a different nomenclature of *vithis* is found in *Bhadrabāhu Sanhitā* (*BBS*. 15.45-49) as :[7]

'*nāga vithi*, *gaja vithi*, *airāvata vithi* (chief elephant lane), *vṛṣa vithi*, *go vithi*, *jaradgava vithi* (old bull lane), *aja vithi*, *mṛga vithi*, and *vaiśvānara vithi*'.

According to *Vāśiṣṭha Sanhitā*[8] (*VS* 7.1-2), *mṛga vithi* and *aja vithi* interchange their positions and *vaiśvānara vithi* is replaced by *dahana vithi* (fire lane) which is merely a name variant of the former. A similar account of *vithis* (lanes) is found in *Bṛhat Sanhitā*[9] (*BTS* 9.1) also. The mode of revision in the nomenclature of *vithis* (lanes) in due time from *TSS* to *BTS* suggests that the phenomena of heliacal rising and setting of Venus might have been studied continuously during this period. However, Varahamihira (505 A.D.) the celebrated author of the *BTS*,

[6] *Thananga Sutram* (*TSS*), Edited with Hindi translation by Kamal, K.L. (1972), Agamanuyoga Prakashan, Sanderao (Rajasthan).
The *TSS* is the third Anga (limb) of Jaina canon of the present recension which is generally ascribed to the council of Valabhi which met under the presidency of Devardhi Gani in fifth or sixth century A.D. For more details, see our paper 'Sources of Jaina Astronomy', *The Jaina Antiquary*, Vol. 29, Nos 1-2, pp. 19-32.

[7] Cf. *Bhadrabahu Sanhita*, 15.45-49, Hindi translation by Nemichandra Jain (1959), p. 212.
Bhadrabahu, the author, belongs to a period of about 313 B.C. See Srinivasiengar, C. N. (1967), *A History of Ancient Indian Mathematics*, p. 20. There was also an earlier Bhadrabahu (468 or 467 B.C.) to whom is ascribed *Kalpa Sutra* as contained in the *Dasasrutaskandha*, one of the six *Cheda Sutras* (See Winternitz, M. (1972) : *A History of Indian Literature*, Vol. II, p. 462).

[8] Cf. *Vasistha Sanhita* (*VS*), 7.1-2, (Bombay 1915).

[9] Cf. *Brhat Sanhita* (*BTS*), 9.1 Hindi commentary by Acyutanand Jha (1959), pp. 80-81.

refers to the popular view-points of others like Kasyapa, Devala, Garga and Samasa from the historical point of view but he himself did not understand much of it as he explicity mentions (*BTS*, 6.7) as :

"*Jyotiṣa* (astronomy) is an *Āgama śāstra* (sacred scriptural knowledge) uttered through intuition. I know little of it but put forth views of others."

Varahamihira makes no reference to the Jaina work *BBS* which exhibits a distinct account of nomenclature of *vithis* ; probably because he referred to only the view points in vogue at that time and thus this portion of *BBS* might belong to a period much earlier than Varahamihira (505 A.D.) lived. It may also be quite probable that Varahamihira might have not come across the text of *BBS* which like the Jaina canonical works, might have been preserved in the memory of Jaina monks for a long time before its present recension might have been redacted. This view is upheld by the fact that the work *BBS* belongs to Bhadrabahu who is said to have convened a council of Jaina monks in Pataliputra and had established a fragmentary Jaina canon which was for long time preserved in memory.[10] However, it appears that *BBS* gives the earliest exhaustive account of *vithis* (lanes) and it exclusively mentions lengths of arcs of inferior and superior combustions of Venus in several *vithis* (lanes). In this context *BBS* 7.206-223 states as :

i.e. Venus sets in the east and rises in the west,

in *vaiśvānara vithi*	after 86 days	(*BBS*. 7.206)
in *mṛga vithi*	after 84 days	(*BBS*. 7.207)
in *aja vithi*	after 86 days	(*BBS*. 7.208)
in *jaradgava vithi*	after 75 days	(*BBS*. 7.209)
in *go vithi*	after 70 days	(*BBS*. 7.210)
in *vṛsa vithi*	after 65 days	(*BBS*. 7.211)
in *airāvata vithi*	after 60 days	(*BBS*. 7.212)
in *gaja vithi*	after 85 days	(*BBS*. 7.213)
in *nāga vithi*	after 55 days	(*BBS*. 7.214)

Venus again sets in the west and rises in the east

in *vaiśvānara vithi*	after 24 days	(*BBS*. 7.215)
in *mṛga vithi*	after 22 days	(*BBS*. 7.216)
in *aja vithi*	after 20 days	(*BBS*. 7.217)
in *jaradgava vithi*	after 17 days	(*BBS*. 7.218)

[10] See ref. No. 6.

in *go vithi*	after 14 days	(*BBS.* 7.219)
in *vṛṣa vithi*	after 12 days	(*BBS.* 7.220)
in *airāvata vithi*	after 10 days	(*BBS.* 7.221)
in *gaja vithi*	after 8 days	(*BBS.* 7.222)
and *in nāga vithi*	after 6 days	(*BBS.* 7.223)

These data may be put in table No. 2 :

Table No. 2

The BBS Numbers of Days for which Venus Remains Heliacally Invisible in Different Vithis (Lanes) among the Stars

Sr. No.	Name of *vithis* (lanes) of Venus		Number of days for which Venus remains heliacally invisible during	
			inferior combustion	superior combustion
1.	*vaiśvānara*	(fire)	24	86
2.	*mṛga*	(deer)	22	84
3.	*aja*	(goat)	20	86
4.	*jaradgava*	(old bull)	17	75
5.	*go*	(cow)	14	70
6.	*vṛṣa*	(bull)	12	65
7.	*airāvata*	(chief elephant)	10	60
8.	*gaja*	(elephant)	8	85
9.	*nāga*	(snake)	6	55

It seems plausible that the phenomena of heliacal combustion, both superior and inferior, had been keenly studied before *BBS* was compiled. The length of arc of combustion implicitly associated with different *vithis* (lanes) of Venus, has been measured in numbers of days for which Venus remains invisible therein respectively. It appears that the variations in the time lengths of arc of combustion have been mainly regarded due to changes in the relative mean velocity of heliacally invisible Venus in different parts of the lunar zodiac and such different relative mean velocities of heliacally invisible Venus have been relatively compared with some conventionally known velocities like those of *haya* (horse), *nāga* (snake) etc.

3. *Order of Vithis (Lanes)*

By inspection (see table No. 2), it is evident that order of *vithis* (lanes), according to *BBS*, follows an arrangement of *vithis* in the descending order of their numbers of days of heliacal invisibility of Venus in inferior combustion. *Vaiśvānara vithi* tops the list. This order is partly violated in case of heliacal invisibility of Venus in superior combustion. By dint of several observational implications of the phenomena of heliacal combustion of Venus, it may be envisaged that the phenomena of inferior combustion could be studied more accurately than the phenomena of superior combustion. Thus in order to divulge the secrets of this theory of kinematical studies of Venus, it seems plausible to depend more on the data relevant to inferior combustion of Venus than on the data of its superior combustion.

Besides, the period of 8 years less 2 days may conveniently be used for Venus ; after this period longitude of Venus decreases by 2° nearly.[11] This period is equivalent to five synodic periods of Venus (synodic period of Venus=583.921 days).[12] So only five *vithis* (lanes) occur in an eight year cycle of Venus and their mid-points (exact conjunctions of Sun and Venus) will be located equidistantly along the ecliptic and forming a regular pentagon with an arc length

$$\widehat{a} = \frac{360^\circ}{5} = 72^\circ$$

We may call $\widehat{a}$ a mean 'basic interval' or a mean stop. This arc $\widehat{a}$ is not the distance between consecutive conjunctions in actual order of occurrence of *vithis*, which is given by the mean synodic arc.

Now as the regular pentagon of mid-points of *vithis* of Venus retrogrades with an angular velocity of 2° an 8-year cycle of Venus, so any vertex (corresponding to mid-point of a particular *vithi* of Venus) retrogrades through $\widehat{a}$ in a period P such that

$$P = \frac{8}{2^\circ}\,\widehat{a} \text{ years}$$

$$= 288 \text{ years} \qquad (\because \widehat{a} = 72^\circ)$$

This suggests that Venus happens to be again in conjunction with Sun at the same place among the stars after a period of 288 years. Con-

[11] See Lahiri, N. C. (1972), *Advanced Emphemeris for Hundred Years from 1951 to 2050 A.D.*, 2nd edition, p. 116.

[12] See Lahiri, N. C. (1975), *Indian Emphemeris*, p. 7.

equently cycle of *vithis* of Venus repeats also. Therefore it seems plausible that the phenomenon of combustion of Venus in different regions of lunar zodiac must have been studied for at least 288 years before one might have pondered over the question of classification of *vithis* of Venus. This leads us to the view that the relevant data as contained in *TSS* owes its existence to a long tradition of observing the phenomena of heliacal rising and setting of Venus, at least a few centuries earlier than *TSS* was compiled.

4. *Nakṣatras (Asterisms) of Different Vithis*

All the 28 *nakṣatras* (asterisms) have been distributed among all the 9 *vithis* (lanes). In this context, *BBS.* 15.45-49 states : *Nāga vithi* occurs in Asvini, Bharani, Krttika; *Gaja vithi* occurs in Rohini, Mrgasirsa, Ardra ; *Airāvata vithi* occurs in Punarvasu, Pusya, Aslesa ; *Vṛṣa vithi* occurs in Purvaphalguni, Uttaraphalguni, Magha ; *Go vithi* occurs in Purvabhadrapada, Uttarabhadrapada, Revati ; *Jaradgava vithi* occurs in Sravana, Dhanistha, Satabhisa ; *Aja vithi* occurs in Hasta, Visakha, Citra, Svati ; *Mṛga vithi* occurs in Jyestha, Mula, Anuradha ; *Vaiśvānara vithi* occurs in Purvasadha, Uttarasadha, Abhijit.

Two more different patterns of allocation of *nakṣatras* (asterisms) to different *vithis* (lanes) are found in *BTS* of Varahamihira. A comparative picture is shown in table No. 3 :

Table No. 3

Vithis and their Nakṣatras

Sr. No.	Name of *vithi* (lane)	*Nakṣatras* according to Bhadrabahu	*Nakṣatras* according to Kasyapa and Devala	*Nakṣatras* according to Garga, Samasa and Varahamihira
1.	*nāga* (snake)	Asvini (β Arietis), Bharani (41 Arietis), Krttika (η Tauri)	Asvini, Bharani, Krttika	Svati (α Bootis), Bharani, Krttika
2.	*gaja* (elephant)	Rohini (α Tauri), Mrgasirsa (λ Orionis), Ardra (α Orionis)	Rohini, Mrgasirsa, Ardra	Rohini, Mrgasirsa, Ardra

Sr. No.	Name of *vithi* (lane)	*Nakṣatras* according to Bhadrabahu	*Nakṣatras* according to Kasyapa and Devala	*Nakṣatras* according to Garga, Samasa and Varahamihira
3.	*airāvata* (chief elephant)	Punarvasu (β Geminorum), Pusya (δ Cancri), Aslesa (ϵ Hydrae)	Punarvasu, Pusya, Aslesa	Punarvasu, Pusya, Aslesa
4.	*vṛṣa* (bull)	Magha (α Leonis) P. phalguni (δ Leonis), U. phalguni (β Leonis)	Magha, P. phalguni, U. phalguni	Magha, P. phalguni, U. phalguni
5.	*go* (cow)	P. bhadrapada (α Pegasi), U. bhadrapada (γ Pegasi), Revati (§ Piscium)	Hasta (δ Corvi), Citra (α Virginis), Svati (α Bootis)	P. bhadrapada, U. bhadrapada, Revati, Asvini
6.	*jaradgava* (old bull)	Sravana (α Aquilae), Dhanistha (β Delphini), Satabhisa (λ Aquarii)	Visakha (α Librae), Anuradha (δ Scorpii), Jyestha (α Scorpii)	Sravana, Dhanistha, Satabhisa
7.	*aja* (goat)	Hasta (δ Corvi), Citra (α Virginis), Svati, Visakha (α Librse)	Sravana (α Aquilae), Dhanistha (β Delphini), Satabhisa (λ Aquarii)	Hasta, Citra, Visakha

Sr. No.	Name of *vithi* (lane)	*Nakṣatras* according to Bhadrabahu	*Nakṣatras* according to Kasyapa and Devala	*Nakṣatras* according to Garga, Samasa and Varahamihira
8.	*mṛga* (deer)	Jyestha (α Scorpii), Mula (λ Scorpii), Anuradha (δ Scorpii)	Mula, P. sadha (δ Sagittarii), U. sadha (σ Sagittarii)	Anuradha Jyestha, Mula
9.	*vaiśvānara* (fire)	P. sadha (δ Sagittarii), U. sadha (σ Sagittarii), Abhijit (α Lyrae)	P. bhadrapada (α Pegasi), U. bhadrapada (γ Pegasi), Revati (§ Piscium)	P. sadha, U. sadha

It may be noted that if *mṛga vithi* (deer lane) and *aja vithi* (goat lane) interchange their places the order of *vithis*, according to Kasyapa and Devala, becomes associated with the *nakṣatras* in the natural order. This way of distribution of *nakṣatras* (asterisms) in their natural order among the *vithis* arranged in the descending order of their numbers of days of combustion (see table No. 2) seems to be more of theoretical interest for practically it cannot hold good as the number of days of combustion is a complicated function[13] of many factors like latitude of observer, apses of orbit of Venus, apses of orbit of earth etc. and especially geocentric latitude of Venus.

According to Garga, Samasa and Varahamihira group, the pattern of allocating the *nakṣatras* (asterisms) to different *vithis* (lanes) is almost the same as that of *BBS*, except that Svati (α Bootis) is transferred from *aja vithi* (goat lane) to *nāga vithi* (snake lane), Asvini (β Arietis) from *nāga vithi* (snake lane) to *go vithi* (cow lane). Besides, Abhijit (α Lyrae) is excluded from the list of *nakṣatras* (asterisms) in *BTS*. This indicates that Varahamihira et al were the followers of Siddhantic astronomy wherein only the 27 *nakṣatras* were held in esteem : and they might have

[13] Ketkar, V. B. (1954), *Graha Ganita* (in Marathi).

endeavoured to verify the ancient data and consequently the *BBS* pattern of allocation of *nakṣatras* to *vithis* might have been modified with some alterations. Besides, according to *BBS*, 28 *nakṣatras* (asterisms) are distributed in an irregular manner among different *vithis* ordered in the sequence of their numbers of days of inferior combustion respectively.[14] It appears that practical observation has an unambiguous bearing upon the relation between *vithis* and their *nakṣatras* during which Venus remains heliacally invisible for the number of days associated with the respective *vithis*.

The lengths of the zodiacal intercopts of different *vithis* can easily be computed by adding the zodical stretches in *muhūrtas* of all their respective *nakṣatras*. For example, according to *BBS*,

[14] See Lishk S. S. & Sharma S. D., 'Zodiacal Circumference as Graduated in Jaina Astronomy', *IJHS*, vol 14, No. 1, pp. 1-15. However, a typical table is reproduced as under :

Table of *Naksatras* (asterisms) and their Zodiacal Stretches (ZS) in *Muhurtas*.

Sr. No.	*Naksatra*	ZS in *muhurtas*	Sr. No.	*Naksatra*	ZS in *muhurtas*
1.	Abhijit	$9\frac{27}{67}$	15.	Pusya	30
2.	Sravana	30	16.	Aslesa	15
3.	Dhanistha	30	17.	Magha	30
4.	Satabhisa	15	18.	P. Phalguni	30
5.	P. Bhadrapada	30	19.	U. Phalguni	45
6.	U. Bhadrapada	45	20.	Hasta	30
7.	Revati	30	21.	Citra	30
8.	Asvini	30	22.	Svati	15
9.	Bharani	15	23.	Visakha	45
10.	Krttika	30	24.	Anuradha	30
11.	Rohini	45	25.	Jyestha	15
12.	Mrgasirsa	30	26.	Mula	30
13.	Ardra	15	27.	P. Sadha	30
14.	Punarvasu	45	28.	U. Sadha	45

Zodiacal intercept of *nāga vithi* (snake lane) = Sum of zodiacal stretches of Asvini (β Arietis), Bharani (41 Arietis) and Kṛttika (η Tauri)
= 30+15+30
= 75 *muhūrtas*

Rearranging *vithis* in accordance with their *nakṣatras* juxtaposed in their natural order vide *BBS* (see table No. 3) ,zodiacal intercepts of all the *vithis* (lanes) and their number of days of invisibility of Venus in inferior combustion are shown in table No. 4 :

Table No. 4

Vithis, their Zodiacal Intercepts and their Numbers of Days

Sr. No.	*Vithi* (Lane)	Zodiacal intercepts (=*ZS*) in *muhūrtas*	Duration of inferior combustion in number of days D_n	$\frac{1}{D_n}$
1.	*nāga* (snake)	75	6	.166
2.	*gaja* (elephant)	90	8	.125
3.	*airāvata* (chief elephant)	90	10	.100
4.	*vṛṣa* (bull)	105	12	.083
5.	*aja* (goat)	120	20	.050
6.	*mṛga* (deer)	75	22	.046
7.	*vaiśivānara* (fire)	$84\frac{27}{67}$	24	.042
8.	*jaradgava* (old bull)	75	17	.059
9.	*go* (cow)	105	14	.071

Thus *vithis* (lanes) can be represented along the zodiacal circumference as shown in figure No. 1 :

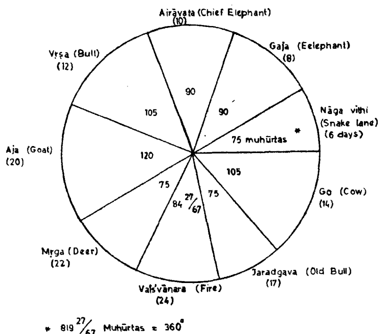


Fig. No. 1 *Vithis*(lanes) of Venus, their Zodiacal stretches in *muhūrta* of arc (1 *muhūrta* of arc denotes angular distance traversed by moon in one *muhūrta* or 48 minutes) and numbers of days Venus remains in heliacal inferior combustion in them respectively.

Now arc of combustion (angular stretch with respect to Sun during which the planet remains heliacally invisible) of Venus remains almost constant (see table No. 1) excluding rare cases when geocentric latitude of Venus becomes very high for places at very high latitudes. This mean velocity V_n of Venus in nth vithi during heliacal combustion can be defined as follows :

$$\int_0^{D_n} V dt = K = V_n D_n \text{ (say)... (1)}$$

where K = Constant (total length of arc of combustion).

In the integrand, V = Instantaneous relative geocentric velocity of Venus which is a complicated function[15] of position of perigee of Venus

[15] See ref. No. 13

D_n = Duration (time counted in number of days) of heliacal combustion of Venus in nth *vithi*

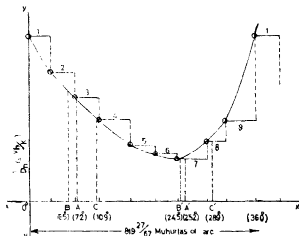
n = Serial number of *vithis* arranged in natural order of *nakṣatras* associated with them such that n=1 represents *nāga vithi* and so on (see table No. 4)

Now from eq. No. (1), we have

$$V_1D_1 = V_2D_2 \ldots\ldots\ldots = V_9D_9 = K \ldots\ldots\ldots (2)$$

$$\therefore V_1 : V_9 : \ldots\ldots\ldots V_9 : \frac{1}{D_1} : \frac{1}{D_2} \ldots\ldots\ldots \frac{1}{D_9}$$

$\therefore$ Mean velocity V_n of Venus in different *vithis* (lanes) can be graphed by plotting $\frac{1}{D_n}$ against their respective zodiacal intercepts (see table No. 4) as shown in fig. No. 2 :



Names of Vīthis : 1 Nāga (Snake), 2 Gaja (Elephant), 3. Airāvata (Chief Elephant), 4 Vṛsa (Bull), 5. Aja (Goat), 6 Mṛga (Deer), 7. Vaiśvānara (Fire). 8 Jaradgava (Old Bull) 9. Go (Cow).

Sidereal longitudes (assuming longitude of spica as 180°) in about 3rd. century B.C.

Sun Apogee = A, Perigee = A'

Venus: Ascending node = B, Descending node = B', Perihelion = C, Aphelion = C'

N.B. Sidereal longitudes in about 1975 A.D[10]. (and approximate velocities)

Sun: Apogee = 79° (+12' per year)

Venus: Ascending node = 53° (−30' per 95 years)

Perihelion = 108° (−0.01 per 19 years)

Fig. No. 2 Graphic representation of mean velocity $V_n = (K/D_n)$ of Venus during heliacal inferior combustion in different *vithis* (lanes) among the lunar mansions under assumption of constant *kālānśa* (arc of visibility).

Besides, from eq. No. (1) we have

$$V_n = \frac{\int_0^{D_n} V dt}{D_n}$$

Now in *vaiśvānara vithi* (n=7), D_n is maximum (see table No. 4)

$$V_7 = \frac{\int_0^{D_7} V dt}{D_7} = \text{minimum value (see table No. 4)}$$

Thus mean velocity of Venus is minimum in *vaiśvānara vithi* (fire lane). This result stands true also for actual physical situation as shown below :

We know that instantaneous relative geocentric velocity of Venus,

$$V = V_v - V_s \ldots\ldots\ldots\ldots (-3)$$

where V_v = Heliocentric velocity of Venus during geocentric retrogression

V_s = Apparent velocity of the Sun

Now as it is evident from fig. No. 2 that perigee (point of apparent maximum geocentric velocity) $\bar{A}$ of Sun lies in *vaiśvānara vithi* i.e. V_s in *vaisvānara vithi* lies in the neighbourhood of its maximum value ; and aphelion (point of minimum helocentric velocity) C of Venus lies very near to that i.e. V_v in *vaiśvānara vithi* lies in the neighbourhood of its minimum value. Thus in *vaiśvānara vithi* the various values of $V (= V_v - V_s)$ would be smaller than its corresponding values in similar situations of Venus in any other *vithi.*

Consequently mean velocity V_n of Venus will also mbe inimum in *vaiśvānara vithi* (for n=7).

Likewise a similar treatment would hold good for other *vithis*(lanes) of Venus. Thus it may be contemplated that numbers of days D_n associated with various *vithis* represent lengths of time for which Venus remains heliacally set in their respective different parts of lunar zodiac. In the absence of an accurate knowledge of motion of Venus, Jainas had developed empirical notion of mean velocity of Venus in heliacal combustion in a particular *vithi* (lane) among the lunar mansions. Such relative mean velocities of Venus were estimated in a qualitative zigzag manner by comparing them with some conventionally known velocities like those of snake, elephant etc. As there was no notion of sinoscidal functions, such discrete step velocities were likely to be apprehended.

5. *Directions of Vithis*

As regards directions of *vithis*, *VS*, 7.1-2 states :

"*Go vithi* (cow lane) is situated at the middle line ; *vṛṣabha* (bull), *gaja* (elephant), *airāvata* (chief elephant) and *nāga* (snake) *vithis* (lanes) occur in the north and *jaradgava* (old bull), *mṛga* (deer), *aja* (goat) and *dahana* (fire) *vithis* (lanes) occur in the south."

Besides, according to *BTS*. 9.1, all the nine *vithis* have been divided into 3 groups of three *vithis* each, viz.[16] North *vithis* : *nāga* (snake), *gaja* (elephant) and *airāvata* (chief elephant); Middle *vithis* : *vṛṣa* (bull), *go* (cow) and *jaradgava* (old bull); South *vithis* : *mṛga* (deer), *aja* (goat) and *dahana* (fire).

Each group is further divided into three groups of a single *vithi* each,[17] eg.

North *vithi*	*nāga* (snake)
Middle *vithi*	*gaja* (elephant)
South *vithi*	*airāvata* (chief elephant)

Using table No. 2, relative directions of *vithis* (lanes) may be shown in table No. 5 as below :

[16] See ref. No. 9.
[17] *Ibid.*

Table No. 5

Relative Directions of Vithis of Venus

Sr. No.	Name of *vithi* (lane)	Numbers of days associated with the *vithi*	Relative directions		
I	II	III	IV	V	VI
1.	*nāga* (snake)	6	N		
2.	*gaja* (elephant)	8	M	N	
3.	*airāvata* (chief elephant)	10	S		N
4.	*vṛṣabha* (bull)	12	N		
5.	*go* (cow)	14	M	M	M
6.	*jaradgava* (old bull)	17	S		
7.	*aja* (goat)	20	N		
8.	*mṛga* (deer)	22	M	S	S
9.	*vaiśvānara* (fire)	24	S		

N = North, M = Middle, S = South

Now it is evident from table No. 5 that middle *vithi* (lane) is associated with number of days lesser (or greater) than number of days associated with northern (or southern) *vithi* (see column IV). All the nine *vithis* have verisimilarly been divided into 3 groups of 3 *vithis* each (see column V). Likewise *go vithi* (cow lane) happens to be the middle one (see col. VI).

It may be recalled that number of days for which Venus remains heliacally set for a particular latitude of observer mainly depends upon geocentric latitude of Venus. So *go vithi* (cow lane) alludes to correspond to mean position (almost geocentric zero latitude) of Venus. According to *BBS*, *go vithi* (cow lane) is associated with Purvabhadrapada (∝ Pegasi), Uttarabhadrapada (γ Pegasi) and Revati (§ Piscium) *nakṣatras* (asterisms) ; whereas Asvini (β Arietis) was also added to the list by Varahamihira et al (see table No. 3). So *go vithi* (cow lane) seems to have been used to occur near Spring equinox in those times. But according to Kasyapa and Devala, *go vithi* (cow lane) used to occur near Autumnal equinox because it is associated according to them, with Hasta (δ Corvi), Citra (α Virginis) and Svati (α Bootis) *nakṣatras* (asterisms).

This also suggests that number of days associated with different *vithis*, according to Kasyapa and Devala, must also differ from those as given according to *BBS*. Kasyapa and Devala had rearranged the pattern

of allocation of *nakṣatras* (asterisms) kept in their natural order among) the *vithis* (lanes) kept in the prevailing sequence (decreasing or increasing) of numbers of days associated with them. Thus they committed a mistake by assuming parallelism between directions of *vithis* and their regular placement along lunar zodiac. Such a parallelism does not hold good for individual *vithis* due to several factors influencing duration of heliacal combustion of Venus; however in a broader sense, *vithis* occurring north (or south) of *go vithi* (cow lane) are associated with *nakṣatras* (asterisms) falling almost in northern (or southern) hemisphere (see table No. 3).

Now it may be recalled that relative directions of *vithis* (lanes) of Venus depend upon their respective numbers of days. Since duration of combustion of Venus mainly depends upon its geocentric latitude, so it may be envisaged that Jainas might have had a notion of geocentric latitude of Venus implied in relative directions of *vithis*. Such a notion is rather supported by the fact that they had a notion of celestial latitude implied in concept of height above *samatala bhūmi* (earth having plane surface denoting a circular area with centre at the projection of pole of ecliptic).[18]

6. *General Remarks*

It may be mentioned here that both in Maxican and Mayan manuscripts the periodic time of Venus is indicated by means of the tonalamatl symbols and the dates of the months respectively. Leaves 46-50 of the Mayan manuscripts in Dresden, exhibit 5 such revolutions of 584 days each which are severally divided into stages of 90, 250,8 and 236 days.[19] But Jainian account of *vithis* (lanes) of Venus is unique in its features. May be that parallel studies were also in progress in both Maxican and Mayan civilizations.

Besides, the procedure text (Astronomical Cuneiform Text No. 812)[20] also describes intervals of invisibility of Venus in inferior combustion and assigns[21]

[18] See Sharma, S.D. and Lishk, S.S.(1975), 'Latitude of Moon as Determined in Jaina Astronomy', *Sramana*, Vol. 27 No. 2, pp. 27-35.
See also Lishk, S. S. and Sharma, S. D., 'Notion of Obliquity of Ecliptic Implied in the Concept of the Mount Meru in Jambudvipa Prajnapti'. Paper presented at Seventh Session of Jaina Vidya Parishad, Jaina Visva Bharati, Ladnun (7-10 Oct. 1977), *Jain Journal*, Vol. 12 No. 3, pp. 79-92.

[19] *Encyclopaedia of Religion and Ethics*, Vol. 3, p. 126.

[20] Cf. Neugebauer, Otto (1955), *Astronomical Cuneiform Texts* (3 Vols.), p. 399.

[21] Cf. Neugebauer, Otto (1975), *A History of Ancient Mathematical Astronomy* (3 Vols.), pp. 460-466, esp. 465.

15 days to Cancer and Leo
4½ days to Sagittarius
1 day to Capricorn and Aquarius
2 days to Pisces

According to Neugebauer,[22] the remaining data are lost and all dates of this type are subject to arbitrary interpretations, whether ½ day is included or excluded, because intervals of invisibility of Venus in inferior combustion (evening setting and morning rising) by definition cannot amount to integer days. It is however worthy of note that these fragmentary data seem to have no similarities with the Jainian concept of *vithis* (lanes), respective *nakṣatras* (and not ecliptic signs) associated with them, their respective numbers of days for which Venus remains heliacally invisible. However a detailed discussion of these fragmentary data is out of scope of their exposition.

However such kinematical notions about the motion of Venus did play an important role in the development of astronomy in post-Jaina early Siddhantic period in the history of ancient Indian astronomy. The *BBS* system of *vithis* (lanes) has been first elucidated. The synodic period of Venus might have also been known as it is simply the periodic time between any two consecutive heliacal inferior (or superior) combustions of Venus. All these gradual progresses in planetary kinematical studies extant in Jaina canonical and allied works are the studies parallel to those of old planetary ephemerides of menomides and seleucid periods. Such kinematical studies of Venus have left an everlasting effect on social activities of the Hindus who still observe heliocentric rising and setting of Venus in their laturgical performances.

[Some of the results contained in this paper were reported at the Sixth Session of Jaina Vidya Parisad, JVB, Ladnun, Jaipur session, October, 1975 and some at First Session of IAHPS, Waltair session, January, 1976.]

[22] *Ibid.*

Sabarimalai

V. G. Nair

Sabarimalai is an ancient hill of Kerala. About forty years ago this hill was surrounded by dense forest haunted by wild animals. Today Hindus have a temple on the top of the hill. The deity of this temple is known as Ayyappan—God Father. Travel on foot was unsafe and hazardous for many centuries. But vehicular roads have been opened providing transportation facilities to reach the hill.

The antiquity of Sabarimalai dates back between 2000 and 2500 years before Christ. Today this hill temple of Ayyappan has become the most renowned centre of pilgrimage to Hindus from all parts of India. Jains, Christians, foreigners and even Muslims visit the hill especially during the Makara Vilakku, the festival of Lights. More than three million pilgrims throng the hill to participate in the Makara Vilakku festival, an annual event of great religious importance in Kerala.

During the Makara Vilakku night a celestial phenomenon would appear on the sky. This phenomenon is in the shape of a lustrous star with a tiny tail. This radiating star could be visible to all for a few minutes and it would disappear in the sky. This phenomenon is called Makara Jyothi, the flame of supernatural light emanating from the heavenly world. According to legends, this flame had been appearing every year from time immemorial.

Sabarimalai has undergone three stages of religious transformation from Jainism to Buddhism and then to Hinduism. Ayyappan worshipped by the Hindus is not the personal name of any Vedic-Hindu God but a symbol of unification of all gods. The name of Ayyappan is untraceable in the Hindu religious scriptures. The word is classical Tamil spoken by the people of Kerala and Tamilnad several centuries ago. Ayyappan etmologically meant Mahadeva or Adideva, the first God Father and Protector.

The ancient inhabitants of Sabarimalai and its surrounding areas were hill tribes—Panchamos or Anaryas of Vedic India. They were an organised community and led an independent existence outside the pale of Vedic society. There is evidence to prove that even in those remote ages Arhant Dharma or Jainism prevailed in Kerala including Sabarimalai. Those hoary days were early centuries of Aryan penetration in South India.

About 4000 years or even much earlier, a tribal woman called Sabari arose to eminence and renown for her wisdom, learning and extreme penance. She lived on the hill and practised austerities in her hermitage. Jain monks might have preached Jainism and guided the people to live the right way of life in the remotest conners of Kerala. Sabari might have come into contact with some of the Jain monks, studied Jain Dharma under them, renounced worldly life in her younger days and was initiated as a nun in the Jain Monastic Order. The present hill on which she practised extreme penance and attained the highest state of spiritual wisdom came to be known as Sabarimalai for perpetuating her sacred memory. Today the hill has become a celebrated symbol of universal worship and the unity of Human Spirit in the religious annals of India.

Sage Valmiki in his *Rāmāyaṇa* has described Sabari in terms of a Mahasramani, which meant a great Jain Nun. Ascetic Bhagavan Mahavira was called Sramana Bhagavan in the Jain scriptures. Acarya Kundakunda has described ascetics of his order as sramanas. An Asokan inscription of 3rd century B.C. has described sramanas as Jain ascetics distinct from Brahmanas. Dr. R. G. Bhandarkar, the noted Indologist has opined that sramanas applied exclusively to the Jain ascetics or monks and not to any other mendicants. On the basis of all these scriptural and epigraphical evidences, we can say that Sabari was a great Jain nun substantiating the statement of the sage Valmiki.

We have trustworthy evidence to prove that in the days of Sabari, there existed on Sabarimalai some places of worship or even *stūpas* containing the body relics of the great Gurus or may be some footprints of Tirthankaras, hermitages and *ārāmas*—garden dwellings for Jain monks and *vidyālayas* or educational institutions conducted by them which are known as Pallis in Jain scriptures including Tamil scriptures. The relics have vanished in the course of several centuries either by vandalism or ravages of time.

In the *Mahāpurāṇam*, a Digambar Tamil scripture translated from Sanskrit, it is stated that Emperor Bharata, son of Rsabhadeva, founder of Jainism, Neminatha or Aristanemi of the *Vedas*, a cousin of Sri Krsna and Samprati, a grand son of Asoka, a Jaina by fatith were pioneers in propagating Jainism not only in India but throughout the world. Neminatha lived between 2000 and 2500 years before Christ. According to the *Mahāpurāṇam*, he came to South India and preached Jainism at Canjeevaram in Tamilnad. Some of the Neminatha's disciples might have visited Sabarimalai and stayed on this hill for propagating Jainism.

In these days, when Hindu pilgrims visit Sabarimalai they recite devotional hymns paying homage to Ayyappan throughout their journey. Among these hymns, they recite repeatedly *palli kettum ketteettu* which means they are carrying a package or bundle containing *pūjā* materials to worship at the Pallis, shrines or *stūpas*. These words are classical Tamil. Palli meant exclusively Jain temple and not Bauddha Viharas or Hindu temples. We do not find the word Palli in other scriptures except in those of the Jains. Palli is an Ardha-Magadhi Prakrit word, the language spoken by Mahavira and the Buddha while delivering their sermons before the common people of Magadha. It is the spoken dialect or language of the lower strata of society in the days of Mahavira. Jain monks of Magadha who came to Tamilnad and Kerala, may be in the 3rd century B.C. or much earlier, in the course of their discourses used the word Palli and gradually this word was adopted in Tamil language. The Roman traders who were in South India carried the word to Rome and Greece and it was incorporated in the Greek language. When the Christian churches were built in Rome in the 3rd century A.D. Palli became the name of the churches. There is no appropriate word in Greek to denote the church and hence the Roman fathers or missionaries called the churches as Pallis or houses of worship. Many other Tamil words which were used by Roman traders were also incorporated in Greek. To illustrate rice is called Arisi in Tamil, peacock is Mayil and ginger is Inchi. These Tamil words intermingled with the Greek language gradually transformed and adopted as Greek. Even today, these Tamil words are spoken and used by Romans, Greek and many other European nations. In later centuries Palli spread to Arabia and adopted in Arabic to denote mosques. Churches and mosques in Tamilnad, Kerala and many other parts of India are called Pallis even today. The word is a legacy from Magadha inherited by Rome, Greece and many other European countries besides Arabia and India. Further, primary schools run by Jain ascetics in Tamilnad and Kerala are called Pallikootams even today. Jain monks were pioneers in the field of education both in Tamilnad and Kerala. The Jain temples and dwellings of monks attached to the temples were also called Pallis. Many villages in Palghat district, my birth place, are called even today with a prefix of Palli. These villages are Elappalli, Nalleppalli. Polpalli Kallepalli, etc. A village in Travancore is called Karunagappalli ; Madanappalli and Yischinappalli are in Tamilnad. These facts go to prove that all these villages were residential areas of Jain monks and places of Jain worship several centuries ago. In the North and South Arcot districts of Tamilnad, there are many Jain temples and villages called Pallis. The hill temple Yirukoyilur is known as Pallichandal. This temple has become extinct but its relics remain even today. The temple at Karur is called Pazaanagapalli.

At Tindivanam near Madras existed a Jain temple called Palli. The Tricy Jinalaya is known as Perumpalli—the Great Jain Temple. The lands owned by temples are Palli Vayal or agricultural fields. In an inscription of the 1st century B. C. discovered at Mangalam village in Tamilnad two Jain temples which existed there were called Pallis. A Jain Hill temple at Alalhur near Palghat town is called Pallikunnu. It is no more but its relics are preserved in the Trichur Museum. An inscription found at Alalhur shows that the hill temple there was built nine hundred years ago. There were several other temples in Tamilnad and Kerala called Pallis but they have become extinct and their relics remain even today. On the basis of all these scriptural and epigraphical evidences to prove that Pallis also denoted Jain temples, we can safely say that there were Pallis on Sabarimalai about 4000 years ago.

There is no evidence to prove that Buddhism prevailed in Kerala before the 3rd century B.C. But some historians have opined that Mahendra, son of Asoka had visited Kerala on his way to Sri Lanka. An Asokan inscription has stated that Buddhist missionaries have been sent to Kerala in the 3rd century B. C. A legend says that Kerala was ruled by king Jayasimha Perumal in the 3rd century B.C. and he was a Buddhist. It might be that the king and a section of the people embraced the religion of the Buddha after the advent of Buddhist missionaries of Asoka. There is no record to prove that Buddhism prevailed in Kerala between the 2nd century B.C. and the 8th century A.D. But we can take it for granted that during these long centuries also there were a large number of Buddhists in Kerala because the Eaeezhuvas came from Ceylon and settled in Kerala before the Christian era professed Buddhism. In the 9th century A.D. the central parts of Travancore were ruled by king Vikramaditya Varagunan. He was not only a devout Buddhist but also an ardent propagator of the faith. Varagunan sent a Buddha image to Qandahar in Afghanistan with his name in Devnagari inscribed on it. Archaeologists have discovered this Buddha image. Varagunan was a generous patron of both Jainism and Hinduism. In some of the *dānapatras* or charity deeds of the 9th century A.D. it is stated that the king had donated lands to Jaina and Buddhist temples. Hiuen T'sang, the Chinese pilgrim monk, from Nalanda has stated in his travel diary, the *Sazyu-chi* or Travels in the Western World or India that he came across many Nirgranthas or Jain ascetics and also Buddhist monks at Kanchipuram in Tamilnad in the 8th century A.D. This evidence would prove that in the days of Varagunan also there were Jainas and Buddhists not only in Tamilnad but also in Kerala situated not far from Kanchi. Varagunan installed a number of Buddha images and also built temples dedicated to Dharma Sastha or the Buddha in Travancore. According to Amarasingha, author

of *Amarakoṣa* Sastha is the Buddha. Amarasingha was a Jain by faith. A number of Buddha images and ruins of Sastha temples have been found in Travancore and the images are worshipped these days by the Hindus. An old book in Sanskrit has narrated some of the activities of Varagunan for promoting Buddhism in Kerala. This king was an eminent scholar noted for his religious toleration. He was a rationalist and a devotee in the Temple of the Universal Spirit. He was an ardent promoter of human brotherhood and peace in Kerala.

During the reign of Varagunan Sabarimalai, which was a noted centre of Jain worship in the previous centuries became a Buddhist centre of worhip for the people of Kerala. Thus king is believed to have installed an image of Avalokitesvara Bodhisattva Buddha on Sabarimalai. It is the present image called Ayyappan worshipped by the Hindus. Similar Buddha images have been found in China, once the citadel of Mahayana Buddism, in Asia.

After the 12th century A.D. Jainism and Buddhism declined in Kerala because of the revival of Saivism and Vaisnavism. Sabarimalai the centre of Buddhist worship in the previous centuries changed hands and fell under the management of the Pantalam king of Travancore. He continued to keep the Buddha image installed by Varagunan besides maintaining some of the Jain and Buddhist rites, ceremonies and long fasts of the Jains. The name of the Buddha image came to be known as Ayyappan or God Father. One of the trustworthy evidence to prove these facts is that Ayyappa pilgrims visiting Sabarimalai should observe fasts, restrain from eating meat or any other animal food preparations, they should not partake intoxicating beverages and should have no sexual relations with women. Another noteworthy custom is that the pilgrims should be clad in black garments, one of the age-old customs observed by the Buddhists in some of the South-East Asian countries while they were on pilgrimage. These Ayyappa Hindu pilgrims should also repeat devotional hymns like *śaraṇam Ayyappa Svāmiye śasanam*—I take refuge in Ayyappan. The *śaraṇam* is Buddhistic like *Buddham śarṇam gacchāmi* or I surrender to the Buddha. Lastly, the pilgrims should ascend eighteen steps to reach the *sannidhānam* for *darśan* of the Ayyappa image. These eighteen steps are symbolic among the several rules of conduct prescribed not only in Jainism and Buddhism but also in Hinduism. There are several reasons to maintain the former Buddha image on Sabarimalai. One reason is that the Buddha is the 9th incarnation of Mahavisnu according to *Bhāgavatham*, the most important Hindu scripture. Therefore, there is no reason why the Hindus should refuse to worship the image of the Buddha. Adi Sankara in the 8th century A.D.,

the supreme Master of all religions, who raised a Victory Pillar at Kanchipuram to commemorate his cultural conquest of India, was known as a Pracchanna Bauddha or a Buddhist in disguise. Sankara has described the Buddha as the Emperor of the Yogis in this Kali age. Besides, in the days of Varagunan Buddhism was the preponderating religion of the people in Kerala but the Buddha image was also worshipped by the Hindus. There is evidence to prove on the basis of the scriptural references that because the Buddha was an incarnation of Mahavisnu it was justifiable for the Pantalan kings to keep the Buddha image for the worship of the Hindus.

Sabarimalai is a living monument of religious and cultural unification in Ayyappan, a great symbol of human brotherhood indispensable to a Democratic Secular Republic like India for promoting unity and peace among the people.

Yatis and Vratyas

J. C. SIKDAR

There are evidences of the existence of the Yatis in the Vedic tradition. It is mentioned in the Vedic literature that Indra cast down the Yatis to the jackels and dogs to be bitten by them.[1] But the gods did not appreciate this bad action of Indra as worthy and proper, therefore, they expelled him from their divine assembly for this reason.[2] The commentators of the *Tāṇḍaya Brāhmaṇa* have interpreted the meaning of the Yatis as *'veda-viruddhaniyamopeta'*, *'karmavirodhi jana'*, *'jyotiṣṭomādi akṛtva prakārāntarena vartamānah'* etc.[3] These adjectives attributed to them clearly prove their Sramanic tradition as opposed to the Vedic tradition.

In the *Bhagavadgītā* the nature of the Munis and Yatis is depicted in this manner that they were equally devoted to *yogasādhanā* (practice of *yoga*). Hence the Muni is regarded as the controller of his sense, mind and intellect, a contemplative soul intent on liberation and free from desire, fear anger,[4] while the yatis[5] are those wise men, who are free from lust (or desire) and anger and fear, who have realized soul, the striving recluses free from attachment.[6]

[1] *juhoti catasro vai disascatasro' avantaradisa.... yatinamadynamanam sirsani.... yat karirani bhavanti, Taittiriya Samhita*, 2.4, 9-2.

nudata manojavah....indro yatinssalavrkebhyah, prayacchat....yam dvisyat tam dhyuyecchuccai vamarpavati, Ibid., 6.2.7.5.

indro yatin salavrkeyebhyah prayacchattesam traya udasisyanta.... etc, Tandaya Maha Brahmana, 13.4.7

indro yatin salavrkebhyah prayacchattamaslila vagabhya-vadatsasuddho' amanyata ....suddhasuddhiyena tustuvanah, Ibid., 14.11.29.

indro yatin (2) *salavrkebhyah prayacchattamaslila vagabhyavadat....etamupahavyam prayacchattam visvadeva upahvayanta yadupahvayanta tasmadupahavyah, Ibid.*, 18.1.9.

[2] Seventh *Pancika*, fifth *adhyayana*, v. 28, *Aitareya Brahmana* (Hindi), p. 448.

[3] Dr. H. L. Jain, *Bharatiya Samskrtimen Jaindharmaka Yogdan*, p. 18.

[4] *yatendriyamanobuddhirmunirmoksaparayanah vigatecchabhayakrodho yah sada mukta eva sah, Bhagavad Gita*, 5. 28.

[5] *kamakrodhaviyuktanam yatinam yata cetasam abhito bhramanirvanam vartate viditatmanam, Ibid.*, 5. 26, etc.

[6] yadaksaram vedavido vadanti visante yadyatayo vitaragah, *Ibid.*, 8, 11.

It is evidently clear from the study of these instances that the Yatis who are mentioned in the Vedic literature besides the Munis were also the monks of Sramanic tradition, but not of Brahmanic tradition because this designation 'Yati' is prevalent even today to be used in the case of Jaina monks, as is used in all the Jaina literature.

Vrātyas

The account of the Vratyas is first come across in the *Atharvaveda*[7] and next in other Brahmanical works.[8] In the study of the Vratyas in brief the question arises who were they, where did they live, whether they were racially different from the Vedic Aryans with a distinct culture, whether they had any relation with other Indian communities or sects, whether they were the members of Sramanic tradition, etc.

Various etymological meanings of the Vratyas have been presented on the basis of the derivative meaning of the word '*vrata*' in the *Subodhabhāṣya* of *Atharvaveda*[9], such as, the word '*vrata*' denotes *samūha* (collection), *samāja* (society), *saṅgha* (association). *janatā* (people or population,) etc.

(1) The one who is benevolent to them is called Vratya (*tebhyah hitam*).

(2) The one who is born in *samūha* (*vrate bhavah vrātyah*), i.e. the one who is born in the society and lives in the *saṅgha* is a Vratya.

[7] *vratya asidiyamana eva sa prajapatim samairayat, Atharvaveda*, 15. 1.

[8] *Vajaseniya Samhita*, XXX, 8.
Taittiriya Brahmana, III. 4, 5, 1, etc.
Tandaya Maha Brahmana, XVII. 1-4, XXIV. 18.
Pamca Vimsa Brahmana, XXIV. 18.
Latyayana Srautasutra, VIII. 6.
Baudhayana Srauta Sutra, XVIII. 25.
Katyayana Srauta Sutra, XXII. 4-1-28.
Samkhyayana Srauta Sutra, XIV. 69-72.
Prasnopanisad, 2. 11.
Mahabharata, VIII. 37, 12 ff : 2026 ff.
Brhatsamhita, 87, 39.
Manusmrti, X. 21.
Abhidhana Cintamani, V. 854 ff.
Amara Kosa, II. 7. 54.
Anandasrama Sanskrit Series, XXII. 5. 4-14, etc.

[9] *Atharvaveda*, XV. 1., *Subodhabhasya*, 4th part, *Kanda* 11-18, p. 24.

(3) The protector of *samūha* (collection of people) or lord of *samūha* is a Vratya.

(4) One who is dedicated to *vrata* (vow) and active in its observance, ascetic, careful in the performance of religious customs and rules, observer of vows like chastity, etc. is a Vratya.

(5) One who is a traveller or wanderer (*vrajati iti vrātya asya tah*), *parivrājaka* (roving ascetic), *sannyāsin* (monk), *upadeśaka* (instructor), wandering religious teacher imparting holy teachings by travelling to different lands,[10] is a Vratya.

Thus there are found various meanings of the word '*vrātya*' in the Commentary of the *Atharvaveda*, whereas its meanings in the *Smṛtis* and *Purāṇas* are contrary to the aforesaid meanings or sometimes derogatory. It should be noted that the eulogy of the Vratya has been made throughout the fifteenth *kāṇḍa* of the *Atharvaveda*. Here Vratya has been depicted in a manner that he has become a great god (*Mahādeva*)[11] like the Brahman of the *Upaniṣad* or the highest Godhood. According to *Sulikopaniṣad*[12], Vratya is one of the many forms of the Brahman as depicted in the *Atharvaveda*. That is to say, in the *Atharvaveda* the word '*vrātya*' is related to Godhood '*parameśvara*' probably because of (1) his being the leader of the *samūha* or *jana*, (2) of his observance of all religious vows and rules properly and (3) of his being the benefactor to the people.

In this way all the meanings of the word '*vrātya*' are connoted to relate to God. It is indicated here that the account of God in the first *Paryāya Sūkta* of the fifteenth *kāṇḍa* of the *Atharvaveda* has been started with the word 'vratya'.[13] This Vratya sent Prajapati,[14] the prajapalaka God, the latter saw the golden soul, so he created the universe.[15] That is to say, here Vratya has been glorified as the great God.

Again, in the fifteenth *kāṇḍa* of the *Atharvaveda* Vratya has also been eulogized as a roving Vedic priest travelling in different non-Aryan lands and converting the people of those regions to Vedic or Brahmanical

[10] *Ibid.*

[11] *sa mahadevo abhavat*, *Atharvaveda*, 15. 1. 4.

[12] Vide *Harvard Oriental Series*, Vol. VIII, p. 769.

[13] *vratya asidiyamana eva sa prajapatim samairayat*, Atharvaveda, 15. 1.

[14] *Ibid.*

[15] sa prajapatih suvarnamatmanmapasyat tat prajanayat, *Ibid.*, 15. 2.

fold.[16] But in the *Yajurveda* Vratya denotes men, getting together in large number, making loud noise, hostile to the Rsis and not belonging to the community.[17] The Vratyas are stated to be the fit objects to be sacrificed at the altar of the god called Atikrustha (Loud-noise)[18] and they are thus included in the list of victims of human sacrifice mentioned in the *Saṁhitās* of the *Yajurveda*.[19]

According to Sayana[20] the word (*vrātya*) denotes as *patita* (fallen), while *Apastambha* etymologically makes the derivation of the word '*vrātya*' from the root '*vrata*' (vow) and Vratya is stated to be *Srotriya*.[21] Baudhayana describes Vratyas as a son of an uninitiated man.[22] In the *Visnudharma purāṇa*[23] Vratya signifies "One who has let go the proper time for the sacrement of initiationship.[24]

According to the *Praśnopaniṣad*,[25] 'Vratya' means one uninitiated "because of his being the first born and there being no one else to initiate him ; therefore, he was pure by nature."[26]

In the *Mahābhārata*[27] a Vratya has been regarded as fallen person and the Vratyas are equated with the Candalas,[28] while the *Brahmāṇḍa*

16 *sa udatisthat sa pracim disamanu vyacalat. . . .ya evam vidvamsam vratyamupavadali . .sa udatistat sa daksinam disamanuvyacalat. . . .tam yajnayajiyam ca vamadevyam ca yajnasca yajamanasca pasavascanu vyacalan, Atharvaveda*, 15. 2., 1, 3, 9, 10, pp. 315-16.

17 *vrate samavetah vratyah*, vide *Dacca University Bulletin* 'Vratya', p. 2. M.L. (Magadhan Literature), pp. 3-4.

18 *Vajaseniya Samhita*, XXX. 5. 22.

19 *Ibid.*, XXX. 8.

20 *Tandaya Brahmana*, III. 4. 5. 1.

21 *Apastambha Dharmasutra*, II. 37, 13-17, *SBE*. II, pp. 37, 118-19

22 *Baudhayana Dharmasutra*, I. 8.

23 *Visnudharma Purana*, III. 233. 72. Cf. *Manu*, II. 39, X. 39, Bloomfield, *Atharvaveda and Gopatha Brahmana*, p.95 on. *Vratya* is derived from compounds like *anyavrata*, *apavrata*, etc. 'having a different custom'.

24 Vide *Vratyas in Ancient India*, p. 12.

25 *vratyastvam pranaikarsiratta visvasya satpatih vayaniadyasya datarah pita tvam matarisvanah, Prasnopanisad*, 2. 11.

26 *Vratyas in Ancient India*, p. 9.

27 *Mahabharata, Karnaparva*, 37, 44-46.
In the verse 32 the *Vratyas* have been stated to be *evam silesu vratesu balhikesu duratmesu*, cf. *Dronaparva*, 14, 3, 17, where the Andhaka-Vrsnis have been called *vratyas*. Vide *Vratyas in Ancient India*, p. 9.

28 *Mahabharata, Anusasanaparva*, line 2621.
Mbh. classes the *vratyas* with the offsprings of society, such as incendiaries, drunkards and so on.

purāṇa[29] states that Vasistha saved various tribes by turning them into the Vratyas and thus gives a hint to understand the Vratya problem. The people of Magadha have been associated with the Vratya.[30]

It is clear from the study of the evidences of the *Smṛtis* that those who have become fallen because of not performing the duties of three *varṇas* are called Vratyas, while their absorption into the Vedic tradition by purifying them with the ceremony of *Vrātyāstoma*[31] is described in the *Tāṇḍaya Brāhmaṇa* of *Sāmaveda*, *Kātyāyana Srauta Sūtra*, *Lātyāyana Srauta Sūtra* and *Apastambhīya Srauta Sutra*. It is also stated that the Vratyas were not initiated and reformed[32] by the Vedic customs. They spoke *adurukta vākya* (i.e. Sanskritized words) in uncouth manner (*durukta riti*), not Vedic Sanskrit dialect but Prakrit language of their own time. They used to bear *Jyāhṛd* (bow without string).[33]

Thus there arose the difference of meanings of Vratya in the *Vedas* and the *Smṛtis* respectively with the passage of time. The Vratya of the *Vedas* is depicted as the benefactor of the people but the Vratya of the *Smṛtis* is stated to be unworthy and deserved to be expelled from the society. That is to say, the meaning of the word in the *Vedas* is accepted as representing goodness, while its meaning in the *Smṛtis* is defined as something worst.

Different scholars have expressed different views on the identity of the Vratyas on the basis of their respective judgements, differing from one another. According to the Sanskrit-English Dictionary of Monier Williams, the word 'vratya' denotes a man of mendicant or vragrant class, a tramp, outcast, low or vile person either a man who had lost caste through non-observance of ten principal *sanskāras* or a man of particular low caste descended from a Sudra and a Ksatriya and according

29 *Brahmandapurana, Madhyabhaga*, 63. 138 ff. Vide *Vratyas in Ancient India*, p. 9.

30 *sarva vratya purvoktani vratyadhanabhi dadyuh, LSS*, VIII. 6. 28.
magadhadesiyaya brahmavandhave daksinakale vratyadhanani dadyuh, vratya magadhdesanivasin, KSS, XXII. 4. 24, cf. *Der Vratya*, pp. 6, 7, 96-97, 143 ; see *Vratyas in Ancient India*, p. 11.

31 *Tandaya Brahmana*, XVII. 1.9, 11.
vratyastomenestva vratyamavadvirameyuh vyavaharya bhavanti, XXII, 4. 29-30, *KSS*. VIII. 5. 29.
KSS XXII. 4. 26 *catvaro vratyadstoma ganayajnah, KSS* XXII. 4.

32 *asamskrta iti, samskarahina vratya ti smrteriti arthah anena. svatah suddhatvam vivaksitamityaha*, Cf. Anandagiri.

33 *Bharatiya Samskrtimen Jaindharmaka Yogdan*, p. 18.
Pancavimsa, B. XVII. 9.

to some the illegitimate son of a Ksatriya who knows the habits and intentions of soldiers".[34]

The "two significant words in the *Vedas*, viz. *'vratāni'* (Rv. III. 25-6) and *vrātyābhām* (Av. 19.23.25)"[35] throw light upon the meaning and significance of the term 'vratya'. It seems that the Vratyas were a band of mobile fighting aboriginal tribes of ancient India with whom the Vedic Aryans came into clash as it is suggested by the attribute *'vratasahah'*[36] given to the Aryan heroes.

According to Panini, *vrāta* was a *Saṅgha* which lived by violence.[37] Dr. V. S. Agrawal thinks that "the *vrātas* seem to have been the same as Vratyas"[38] and the word *'utsedha'* of the *Kāśikā* corresponds to *Praśedha* of the *Lātyāyana Srauta Sūtra*,[39] while Patanjali refers to *vrāta* as *saṅgha*.[40] Sayana explains the word *'vrāta,'*[41] as *vrātyasamudāya*, Weber holds the view that Vratas or Vratinas were non-brahmanical

[34] *Sanskrit-English Dictionary*, p. *1043*.
(a) *Vratyagana*—the Vragrant class.
(b) *Vratyacarya*--the life and practice of Vagrant.
(c) *Vratyatva*—the condition of a Vratya.
(d) *Vratyadhana*—The property of a Vratya.
(e) *Vratyayajaka*—one who sacrifices for a Vratya.
(f) *Bangiya Sabdakosa* (by H. C. Bandopadhyaya), p. 2237.
(i) *Vyasa*—1. 20 *vedavratacyuta vratyah*.
(ii) *Sulayajurveda*, XXX. *8 Savitripatitah*.
(iii) *Yajnavalkya* 1. 38 ; *Visnupurana*, 27. 27.
See *Vratyas in Ancient India*, p. 73, Fn. 12.

[35] *vratamvratam ganam ganam* (*Rv*. III. 26.6).
vratyabhyam svaha (*Av*. 19. 23-25).
According to Bloomfild (Vedic Concordance) *vrata* has been defined as *Samghatmaka* (*Rv*. 1. 163-8).
(*anu vratasastava sakhyanuyu* etc.)
avivaksitagana (*Rv*. 5.5.11) ; *samuha* (*Gopatha Brahmana* 6. 79. 51) and also in *Raghuvamsa* (XII. 94)
Vide Vratyas in Ancient India, p. 13.

[36] *vratasahah*, *Rv*. VI. 75. 9. yo *va senanirmahato ganasy raja vratasva prathama vabhuva*, Vide *Vratyas in ancient India*, p. 14.

[37] *utsedha jivinah samgha vrata*, *Panini*, *Kasika*, V. 3. 11. 3.

[38] Dr. Vasudev Agrawal, *India as Known to Panini*, p. 440,

[39] *vratyaprasedhamanayanti*—comm. *lokamasedhantah prasayantah*, *LSS*, VIII 6.7.

[40] *vratena jivati kim vratam nama ? nana jatiya aniyatavrttaya utsedhajivinah samgha vratah tesam karma vratam vratakarmana jivatit vratinah*, Patanjali's *Mahabhasya*, **5.2.21**.

[41] *T. M. B.*, XVII. 1. 5.

western tribes [42] and "the Vratya is derived from the word *vrāta*" (troop) the chief of a band of wanderers of Aryan extraction, but absolutely independent, free from the fetters of Brahmanical heirarchy and not following the Aryan way of life.[43]

According to Dr. Karmarkar,, "(the institution), being the earliest organisation of the proto-Indians, pervading through the whole of India, to nullify the effects of which the Aryans started a parallel institution of the *cāturvārṇyam*".[44]

Griffith holds the view that Vratya was a heretical nomad, a human wanderer in search of food and lodging, a religious mendicant, regarded as a being of peculiar sanctity,[45] while Zimmer maintains that the Vratyas were a classless people outside the pale of Brahmanical social polity[46] of the Aryans, although they were Aryans.

Some scholars maintain the view that the Indo-Aryans who emerged as a result of the racial synthesis of the Vedic Aryans, the Dravidas and the Nisadas with the Alpines and Bahiraryas[47] or the outer-band Indo-Aryans living outside the jurisdiction of the Vedic Aryans were the Vratyas. They were not the Vedic Aryans. They have been called Vratya in the *Srutis*.[48]

Conclusion

The Vratya is said to have been derived from the two words '*vrata and vrāta*' as discussed above, in the derivation of which there arise some difficulties. But it is certain that the Vratyas were a people located at some particular place, having their own culture. Since the very question of the Vedic Aryans and their original home is not yet satisfactorily solved, it is not possible to identify the Vratyas with either one group of the Aryans or with the Non-Aryans at the present state of our knowledge

[42] *History of Indian Literature*, p. 78.
cf. Vi II 344. Weber. 51, 121-40.

[43] Weber, *Indische Studies*, I. 35, vide *Vratyas in Ancient India*, p. 14.

[44] A. P. Karmarkar, *The Religion of India*, Vol. I, p. 19, *Vide Vratyas in Ancient India*, p. 14, Fn. No. 22.

[45] The *Hymns of Atharvaveda*, and also its preface, p. 199, Vol. II, Griffith, vide *Vratyas in Ancient India*, p. 15.

[46] *All-Indisches*, Leben, p. 256.

[47] *Indo-Aryan Races*, p. 75.

[48] *Ibid.*, vide *Bharatiya Saktisadhana* by Dr. Upendra Kumar Das, p. 43.

about them without taking into consideration the history of the localities with which they were associated.[49]

It is apparently clear from the evidences, as pointed out, that in the beginning the word 'Vratya' was used to denote Sangha and a tribe or caste, but later on with the development of Indian society the very word was applied to signify the people who did not observe the customs and rites of the Vedic Aryans and those who became fallen in the Vedic traditions. It seems that the culturally advanced Vratyas merged with the Vedic Aryans, while the culturally backward lower Vratyas were condemned as fallen or outcaste.

[*To be continued*

[49] See *Index to the names in the Mahabharata*, p. 752, S. Sorensen., cf. *Mbh.*, V. 1229 ; VII. 5965, VIII. 2038, 2045, 2057, 2069, 2090, XII. 10869, XIII, 2621 for reference to *Vratyas*, cf. *Der Vratya*, pp. 233-40, cf. *Yogapraxis*, 176 ff. Hauer, vide *Vratyas in Ancient India*, p. 16.

Jainism is not a Rebellious Child of Vedicism or Hinduism

JYOTI PRASAD JAIN

Some modern scholars, owing mostly to deeprooted prejudices or other sentimental reasons, persist in asserting that Jainism is an offshoot of Brahmanism or that the Jainas are merely Hindu dissenters like the Buddhists, even though their religion is quite independent of and much older than the latter.

There are, however, absolutely no grounds for holding such an opinion. We have innumerable allusions in the Brahmanic literature from the *Vedas* down to the *Purāṇas* and other mediaeval works, to the Jainas, their religion, its Tirthankaras and even their doctrines, some times ridiculing and denouncing them, at others praising and applauding them, while very often misunderstanding and misinterpreting them. In certain places, devotion to Jina or to particular Tirthankaras, even Jaina ascetics, is ranked much higher than all the religious observances enjoined by the *Srutis* and *Smṛtis*.

Prof. V. P. Vadyar, a reputed Vedic scholar says, "According to the Jaina scriptures, Marici, the grandson of Rsabhadeva, was a materialist. Because the *Vedas* represent the same materialistic spirit, it was certainly due to him that they came to be popular. Consequently there are some hymns to be found in the *Vedas* and *Purāṇas* in the memory of sage Marici, and there are mentions of the Jaina Tirthankaras at many places. Hence there is no reason why we should not accept the existence of Jainism in the Vedic age."

Barrister C. R. Jain, successfully refuting the Hindu-dissenter theory, concludes, "Thus Jainism, the creed of the holy Tirthankaras, far from being a daughter or rebellious child of Hinduism, is actually the basis of that undoubtedly ancient creed, and if there was any borrowing, it was more the other way round." Prof. H. Jacobi says, "In conclusion, let me assert my conviction that Jainism is an original system, quite distinct and

independent from all others ; and that, therefore, it is of great importance for the study of philosophical thought and religious life in ancient India." M.M. Dr. Ganga Nath Jha, too, is of opinion that "The Jaina philosophy no doubt holds certain principles in common with Buddhism, Vedanta, Sankhya, Nyaya and Vaisesika systems, but this does not disprove its independent origin and free development. If it has some similarities with the other Indian systems, it has its own peculiarities and marked differences as well." Prof. G. Satyanarayan Murti also observes, "Some of its doctrines are peculiar to itself and leave a stamp of individualism on the Jaina creed;" and Dr. Guerinot, the French savant, that "Jainism is very original, independent and systematic doctrine." In his paper 'Jainas and Hindus', Prof. Chintaharan Chakravarti says, "Though it is not possible at this stage of our knowledge to determine the comparative antiquity of Jaina and Brahmanic things, the realistic and rationalistic tone of the former does not fail to attract notice of even a casual observer." Another authority asserts, "We may make bold to say that Jainism, the religion of *Ahimsā* (non-injury) is probably as old as the Vedic religion, if not older...... There is no doubt that the religion of *Ahimsā* was as old as the Vedas themselves." Yet another eminent thinker observes, "Besides there being numerous references to Jainism in the *Vedas* and *Purāṇas*, another simple fact shows that Jaina philosophy is as old as Hindu philosophy. It is a feature of the early epoch of the development of metaphysics that the category of quality is not defined... Yet another fact is its (Jaina) hero worship, the worship as deity of perfected mortals, and such worship is characteristic of all primitive religions. Lastly, there is its animistic belief, again a primitive notion." In fact, as Dr. Edward Thomas, speaking about the simplicity, hence greater antiquity of Jainism, remarks, "The more simple faith *per se* must be primarily accepted as the predecessor of the more complicated." And "What more simple" asks Major Gen. Furlong, "Can there be than Jainism, be it in worship, in rituals, or in morals ?"

Reviewing the whole situation, Prof. Ramaswami Ayengar may be quoted, who says, "For a scientific student of early Indian History, the history of the Jainas begins from the time of Mahavira who is supposed to be the founder of Jainism. This conception regarding the origin of the faith has unfortunately led scholars to believe that Jaina tradition and literature are unreliable and useless for reconstruction of history. The less well informed among them went so far as to say that Jainism was an offshoot of Buddhism, simply because certain details in the lives of Mahavira and the Buddha are coincidental. Nor was Dr. Hoernle, perhaps the most well meaning amongst the writers on the subject, any nearer the truth when he said that neither of the sects could lay claim

to originality regarding their moral code, but that the Brahmana ascetic was their model from which they borrowed many important practices and institutions. With, however, our present knowledge of the Jainas and their sacred literature, it is not difficult to prove that *Jainism, far from being on offshoot of Buddhism or Brahmanism, was one of the earliest home religions of India*. The simple devotion of the Jainas and their homely prayer, without the intervention of a Brahmana, may prove not merely their antiquity but, what is more important, the independent nature of their existence." Moreover, as F. W. Thomas avers, "Jainism, on the other hand (unlike Buddhism, etc.) has preserved down to the present time, its integrity as a separate world in the midst of Hinduism."[9]

It will not be out of place in this context to quote a few legal authorities : T. N. Sheshagiri Ayer, Judge of the Madras High Court, said, "I have no desire to date the Jaina religion at a period subsequent to the *Vedas* ; it might be simultaneous with them. Jainas are not the Hindu dissenters. I can fully bear out the statement that all Jainas are not Vaisyas. They are of all castes and grades."

The Hon'ble Justice Coomar Swami Sastri, Chief Judge of the Madras High Court, observed, "Were the matter *resintegra*. I would be inclined to hold that modern research has shown that Jainas are not Hindu dissenters, but that Jainism has an origin and history long anterior to the *Smṛtis* and commentaries which are the recognised authorities on Hindu Law and Usage. In fact, Mahavira, the last of the Jaina Tirthankaras, was a contemporary of Buddha, and died about 527 B.C. The Jaina religion refers to a number of previous Tirthankaras, and there can be little doubt that Jainism as a distinct religion was flourishing several centuries before Christ. In fact, Jainism rejects the authority of the *Vedas* which form the bedrock of Hinduism and denies the efficacy of various ceremonies which Hindus consider essential."

And, Mr. Justice Rangnekar of the Bombay High Court remarks, "It is true the Jainas reject the scriptural character of the *Vedas* and repudiate the Brahmanical doctrines relating to obsequial ceremonies, the performance of *śrāddhas* and the offering of oblations for the salvation of the soul of the deceased. Amongst them there is no belief that a son by birth or adoption confers spiritual benefit on the father. They also differ from the Brahmanical Hindus in their conduct towards the dead, omitting all obsequies after the corpse is burnt or buried. Now it is true, as later historical researches have shown that Jainism prevailed in this country long before Brahmanism came into existence or converted into Hinduism. It is also true that owing to their long association with

the Hindus, who formed the majority in the country, the Jainas have adopted many of the customs and even ceremonies strictly observed by the Hindus and pertaining to Brahmanical religion."

The late Pandit Jawahar Lal Nehru also asserted, "Jainism and Buddhism were definitely not Hinduism nor even Vedicism, still they were born in India and were an inseparable part of Indian life, culture and philosophical thought. The Jainism or Buddhism of India is a cent per cent product of Indian thought and civilization, yet none of them is Hindu. Hence it is misleading to call Indian culture by the name of Hindu culture."

In fact, in the words of Prof. S. Srikantha Sastri, "It has become customary to take granted the statements of certain historians that Jainism like Buddhism represents a reaction to the sacrificial cult of Vedic Aryans, and in the case of Jainism many scholars are reluctant to take back the history of the faith before Parsva in about the 9th century B.C....' But, as Dr. Jacobi observes, "There is nothing to prove that Parsva was the founder of Jainism ; Jaina tradition is unanimous in making Rsabha, the first Tirthankara, as its founder." And, Dr. S. C. Vidyabhusana declares, "Jainism reaches back to the beginning of the creation itself. I have no doubt in asserting that Jaina philosophy is much anterior to Vedanta and other systems."

Thus, it goes without saying that Jainism neither started as a reaction to the sacrificial cult of the Vedic Aryans, nor is it an offshoot of Brahmanism, and, therefore, the Jainas cannot be dubbed as Hindu dissenters in any way.

A Note on Jaina Sculptural Remains at Sitalpur, Bhangra, Harup and Deoli Villages in Purulia District

ATUL CHANDRA BHOWMICK

Sitalpur and Bhangra villages are situated about 8 kms. to the north-east of Purulia town in West Bengal and 1.5 kms. south and 1 km. north of Bhangra *mour* (crossing) respectively on Hura road. The villages Harup and Deoli also under purview of discussion are situated nearly 3 kms. south-west from the Suisa railway station, near the Baghmundi hill. This note is prepared on the basis of the iconography and style of the sculptural remains.

1. Rsabhanatha at Sitalpur village

The image of Rsabhanatha (fig. 1) is set in the northern wall of the Siva temple, situated at the southern side of the Sitalpur village and is carved in chlorite-schist. The sculpture measures 132.5 cms. × 64.0 cms. Rsabhanatha stands erect on a raised lotus throne (*padmāsana*) in *samapadasthānaka* in *kāyotsarga āsana* (letting loose the body), hands dangling down stiffly at a point above the knee height facing the palms towards the body. Mild form, youthful body and nudity are distinguishing features. Pedestal (6.0 cms. × 4.5 cms.) shows from right to left a figure of a *vyāla*, female donor in kneeling posture with *añjali mudrā* showing obeisance, head of an animal with horn and a human figure, bull—his cognizance, human figure holding a stick in his right hand and a lotus in his left hand, male donor in kneeling posture with *añjali mudrā* and *vyāla* indicating the lion throne. The pedestal shows a bloomed lotus with petals curling out in two rows. Rsabhanatha is adorned with *jaṭā-mukuṭa* having a knot in the hair in front. The aura is rimmed beautifully with lotus petals. The *śirascakra* is ovaloid instead of being round as if to connote an effulgent symmetry with the crown of the god. The top of the stele is crowned with a trilinear *chatra*, each smaller than the one below. The *chatra* is crowned by a tier which has delineation of leaf pattern indicating the heavenly *nyagrodha* or banyan tree under which Rsabhadeva received the *kevala jñāna*. Rsabhanatha is flanked by adherent

chowri (fly-whisk) bearers, one on each side viz., Bharata and Bahuvali and each stands on one leg, another leg hangs angularly up to the knee height of the image. The *cāmara* (fly-brush) bearers are exquisite in quality and impressive in form. The image is carved in high relief (6 cms.-7 cms. deep) that renders the effect of three dimensional volume to the deity envisaged. A flying *vidyādhara* holding a garland in hands is carved on each upper corner of the stele in front of the halo beautifully carved with a scalloped border. Above the *vidyādhara* figures, slightly placed inward, on right side symbols like *hatthaga* beating *tammata* (drum), on left side *jaya-ghaṭa* (cymbal) beating for heavenly music and blossomed lotus indicating showers, on each side following an accepted convention the celestials are here conveying the adoration of the sculpted divinity. The two sides of the stele are carved with four rows of small Jina figures, three in group, standing in *ābhanga* pose. Below the succeeding lowest row of Jina figures of nine *jyotiṣka devas* or *graha devatās* in single file, four being on the right side and five being on the left in sitting are arranged holding *āyudhas* in their hands for supremacy of the planets over the different quarters (*dik*). The main figure Rsabhanatha and Jina figures on both the sides are delineated by strings of beads hanging from *toraṇa* downward on either side of it. All the surrounding goddesses, heavenly beings are paying their respect to the Tirthankara. The details of the eyes and nose of Rsabhanatha are abraded either for vendalism or for neglect. On the day of *Caitra* (March-April) *saṅkrānti* villagers worship sacerdotally Lord Siva during *gājan* festival. On that day, the entire Hindu villagers, irrespective of caste, offer adoration and obeisance to Rsabhanatha also. The date of the sculpture may be placed in c. 12th Century A.D.

2. Rsabhanatha at Bhangra village

The sculpture of Rsabhanatha (fig. 2) is fixed firmly in the southern wall of the Durga temple, situated at the Western fringe of the village. The image measures 104.5 cms. × 49.0 cms. and is carved in grey sandstone. With the passage of time the sandstone has flaked off badly and thereby it shows an eroded appearance. Rsabhanatha stands erect on a full-bloomed lotus seat, the petals being spread out downwards and upwards and arranged in two rows. The pedestal bears, from right side to left, a figure of *vyāla*, seated donor, bull—his cognizance, donor with bended knees and *vyāla*. The finial is a representation of an umbrella, monotire. Rsabhanatha is adorned with a *jaṭā-mukuṭa*. A *cāmara* bearer flanks right side of the image, left being broken. A flying *vidyādhara* holding a garland in hands is carved on each upper corner of the stele in front of the halo. The right and left edges of the stele have six

rows of Jina figures in pair. The specimen does not supply any more evidence regarding its workmanship. The image may be assigned to c. 10th Century A.D. on grounds of style and convention followed.

3. Devi image, Bhangra

Sri Janardan Misra of Bhangra village unearthed from his kitchen-garden a broken and much abraded devi image (fig. 3). Similar figure is carved on each face of the circular disc. The diameter of the disc is 43.0 cms. ; while the lower portion broken away is unfortunately missing. The existing piece has a crowning lotus. The Devi has six arms, three on each side. Arranged clockwise from the lower right hand the goddess holds bell, arrow, sword, disc, bow and shield.

The figure on the reverse is envisaged in the same pose holding similar *āyudhas* by hands, exactly as those of the obverse. The image is carved in chlorite and it may be identified as Acchupta goddess of the Svetambaras. The pacing position of her feet indicates that she is riding on her *vāhana*, horse, her usual vehicle. The disc to be viewed from either side appears to be a *dhvaja* usually placed to the front of a temple on a pillar to indicate the identity of the temple when it was dedicated. The image is of c. 10th Century A. D.

4. *Parsvanatha*, Bhangra

The Shahu Jain Trust had constructed a Jaina temple complex in 1381 B.E. at the heart of Bhangra village to preserve uncared for Jaina images lying scattered nearby. A statue of Parsvanatha standing in the *kāyotsarga* pose, with the pedestal, legs, left part of stele, halo, head and a part of the *chatra* overhead badly mutilated and lost, exists in the temple. The missing portions are reconstructed with cement and the image is fixed on a cement-made structure placed middle in the temple. Two flying *vidyādharas* holding garland are carved on upper part of the stele, one on each side. On right, *hatthaga* playing cymbal and drum beating on left side are depicted conveying the adoration of the divinity. On the right side of Parsvanatha two seated figures on lotus seat, the top one is holding lotus in his hands and the below is holding a stick by his right hand and the left hand being highly defaced, no *lāñchana* is visible. No detailed study is possible because the image has many parts missing. The image is carved in chlorite and may be stylistically assigned to c. 10th Century A.D



Fig. 1
Rsabhanatha, c. 1200 A.D.



Fig. 2
Rsabhanatha, c. 1000 A.D.



Fig. 3
Devi, c. 1000 A.D.



Fig. 4
Devi, c. 900 A.D.

5. A miniature shrine, Bhangra

A four-sided monolithic chlorite-schist, cylindrical in shape, is tapering gradually towards the top. It has a structural simile to the *caumukhī* (quadruple). The structure looks like an Orissan miniature temple having three *pagas* at each corner of the face and a flight of ten terraces at its top. The structure measures 42.0 cms. × 14.0 cms. One face of it shows Rsabhanatha, flanked by fly-fan wavers, one on each side. The structure has no other figure or any recognising symbols to be mentioned here.

6. Devi image at Harup village

Under a Mahua (*Bassia latifolia*) tree at the north-east corner of a large tank (locally known as the Harup *bāṅdh*) in the southern side of Harup village a beautifully carved and well preserved Devi image (fig. 4) is lying. Devi is four armed and ridingon a excellently modelled elephant in a moving posture. Arranged clockwise from the lower right hand Devi holds *vajra-daṇḍa* (thunder-bolt), sword, shield and goad. A man stands at the backside of the elephant griping a long stick suggesting an umbrella over her head. The pacing legs of the elephant indicate the speed of its motion rushing forward. The tusked elephant is bedecked with neck ornaments and bell. Devi is bejewelled with ear ornaments, pendant jewel (*palamva*), bangles and armlets. Her flanked hair seems to be enclosed in a close fitting beaded fillet. Her face is roundish and chin is oval. The figure of Devi and burly elephant are filled with a spirit of naturalism and freedom from heresy canonical and mythical injunctions. A *chatra* crowning the top of the stele and flying *vidyādharas* holding garlands are carved on each upper corner of the stele. Devi with her ponderous *vāhana gaja*, locally known as *hātiyāsinī* has a two tiered lotus pedestal. Below the seat on pedestal, from right to left, men playing, in a dancing posture, with *dundhubhis* (musical instruments) like *bherī* (trumpet), *tammaṭa* (drum) and *jaya-ghaṭa* (cymbal). At the middle of the pedestal a deer (?) separates two dancers, each on either side. The Devi may be identified canonically as Ankusa of the Svetambaras. The image is a rare and unusual find in the Manbhum area where the Digambara sect dominated from late Gupta period down to 12 Century A.D. It has a considerable iconographic likeness to the Hindu goddess Indrani (?) [cf. Mitra : 1969 : pl. XXXV (B)]. The image is carved in a chlorite-schist measuring 72.5 cms. × 37.0 cms. The image has a seductive and elegant beauty of its own. The supple and pliable nature of the figures indicate the climax of sculptural art which had once flourished in Bengal. The voluptuous modelling of the figures assignes date to c. 9th Century A.D.

7. A Jaina sculpture at Deoli village

At the northern side of Deoli vilage there was a *pañcāyatana* group of temples. [Ghosh : 1974 : 157, pl. 89A]. Almost all the temples are ruined and their broken parts lying helter-skelter at the place nearby. The place may yield a veritable storehouse of Jaina antiquities, including *toraṇas*, railing pillars with reliefs of demi-gods and goddesses and a few sculptures. Probably the temple enshrined relics dedicated to Jainism. A beautifully carved image of Jaina Tirthankara is placed in the sanctum cella of a ruined temple. The whole pedestal of the image is installed into the earth of the palatial temple covering the cognizance and other pedestal figures out of vision for which the image defy identification. The image is in *kāyotsarga* pose and on the right side of it stands a man holding a stick by two hands suggesting an umbrella over the head of the god. The stele is triangular and *hatthaga* playing drum and cymbal are carved on right and left sides respectively. Flying *vidyādharas* holding garlands are carved on upper part of the stele, one on each side. A flutted *āmalakaśilā* is placed on the trunked top of the stele. A lion is carved at the base of the *āmalaka* suggesting the lion throne. The two lateral side-images rest on two planes. The inner higher plane lodges standing small Jina figures, three in group arranged in three succeeding rows. Corresponding to the rows figures of *graha devatās* are carved on each side on the outer lower plane in arched niches. On right side of the image there are five *graha devatās* and four on left side. Near the basement *gajaśārdūlas* standing on lotus bases are carved on right and left sides. The image may well be attributed to a convention of c. 12th Century A.D. The image is carved delicately with high workmanship in chlorite. Sri Sasti Prasad Banerji of the village informed that the Hindu populace even today worship the image on *Jyaistha* (May-June) *saṅkrānti* and other religious auspicious festiv days to fulfil one's vows.

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To look at all as one with himself is ahimsa.
—Mahavira

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